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EDUCATION

CAREER EDUCATION AND STUDENTS' EMPLOYABILITY IN WEST AFRICAN HIGHER EDUCATION INSTITUTIONS: THE EDUCATION COLLABORATIVE PERSPECTIVE

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ABSTRACT

This study examines the state of career education and employability tracking in higher education institutions (HEIs) in West Africa, highlighting key challenges and opportunities. Using Holland's Career Choice and Human Capital Theories, the study explores how universities align academic programs with labor market demands and the effectiveness of career services in preparing students for employment. Findings on career education and employability tracking from 37 Higher Education Institutions in West Africa reveal that private universities have stronger career services and employer linkages, while public universities face challenges such as limited funding, bureaucratic constraints, and weak employability tracking systems. The study also highlights the low adoption of structured career curricula and graduate tracking mechanisms, making it difficult for HEIs to assess and enhance student employability. To address these gaps, the study recommends strengthening university-industry collaborations, integrating career education into curricula, increasing funding for career services, leveraging digital tracking systems, and engaging alumni in mentorship programs. Policy reforms are also necessary to institutionalize career education and employability tracking in all HEIs. By implementing these strategies, universities can better prepare students for successful career transitions, economic participation, and workforce adaptability in an evolving job market.

Keywords: *Career development, Employability, West Africa, Higher Education Institution, Education Collaborative*

INTRODUCTION

The evolving dynamics of global economies and labor markets have highlighted the critical role higher education institutions (HEIs) play in equipping students with the skills and attributes necessary to thrive in competitive environments. In West Africa, where youth unemployment rates are among the highest globally, HEIs are increasingly called upon to integrate career education into their academic frameworks to address these challenges (Esson & Ertl, 2016). According to the African Development Bank, over 60% of the unemployed in Sub-Saharan Africa are youth, despite a significant rise in tertiary education enrollment. This paradox underscores the disconnect between academic training and labor market requirements (ESSA, 2024). Globally, employability has emerged as a fundamental objective of HEIs, with many institutions integrating career development learning into their curricula to prepare graduates for the workforce (Clarke, 2018; Rothwell et al., 2009). However, in West Africa, career education remains underdeveloped, with institutions facing resource constraints, insufficient employer engagement, and limited graduate tracking systems (Makuwira, 2020; Esson & Ertl, 2016).

HEIs in West Africa are uniquely positioned to bridge the gap between academic knowledge and labor market requirements through innovative career education programs that encompass skill development, experiential learning, and industry engagement. These programs are designed to not only provide students with technical expertise but also enhance their adaptability, critical thinking, and networking capabilities to align with labor market needs. Career education refers to structured initiatives designed to equip students with the knowledge, skills, and experiences required to make informed career decisions and successfully navigate the labor market (Healy et al., 2022). Employability, on the other hand, is defined as the combination of personal attributes, skills, and knowledge that enables individuals to secure and maintain meaningful employment, as well as adapt to changing job market conditions (Clarke, 2008; Ergün & Şeşen, 2021). These interconnected concepts underscore the critical need for HEIs to develop curricula and programs that align with the evolving demands of employers and prepare students for sustainable careers.

Career education, when effectively integrated into HEIs, provides a foundation for students to acquire essential skills, foster adaptability, and enhance their employability. Theoretical frameworks such as Holland's Career Choice Theory and Human Capital Theory highlight the importance of aligning individual skills and interests with career opportunities to optimize workforce readiness and economic contributions. Studies from developed countries demonstrate that structured career services, including industry collaborations and career counselling, significantly improve graduate employability and satisfaction. However, in the West African context, there remains a scarcity of empirical data and a pressing need for robust systems to measure and enhance employability outcomes (Clarke, 2018; Carvalho & Santos, 2021; LinkedIn Report, 2022).

The Education Collaborative is a Pan African continental initiative aimed at enhancing the quality and impact of higher education in Africa, with a focus on fostering student employability and leadership development. Birthed at Ashesi University in Ghana, the Collaborative brings together higher education institutions, industry leaders, and policymakers to share best practices, build institutional capacity, and create sustainable systems for graduate success. Its strategic priorities include the development of career services, promotion of ethical leadership, and fostering entrepreneurial ecosystems across member institutions. By facilitating partnerships and leveraging research, the Collaborative seeks to address pressing challenges in education, such as aligning curricula with labor market demands, fostering inclusive learning environments, and promoting sustainability. A hallmark of its efforts is the

commitment to achieving measurable employability outcomes, such as tracking graduate transition rates and integrating structured career education into institutional frameworks. This initiative underscores its goal of transforming Africa's education landscape to empower graduates for impactful careers and contributions to their communities.

Since 2017, The Education Collaborative has taken significant steps to address these challenges by fostering employability among students through structured career services, industry collaborations, and strategic capacity-building efforts. Recognizing that career education must go beyond traditional skill development, this initiative emphasizes the importance of cultivating entrepreneurial mindsets, adaptability, and resilience among students. Employability is not merely about securing a job post-graduation; it encompasses the broader development of skills, knowledge, and attributes necessary to sustain fulfilling employment throughout one's career (Rothwell et al., 2009; Clarke, 2018). Furthermore, employability depends not only on individual responsibility but also on contextual factors, such as institutional policies and labor market dynamics, which influence students' career outcomes (Berntson et al., 2006).

A significant research gap exists in understanding how regional collaborative efforts, such as the Education Collaborative, can systematically improve employability outcomes in West Africa. While employability has been extensively studied in developed nations, there is limited empirical data on its implementation in Sub-Saharan Africa. Studies in the global north highlight the effectiveness of structured career services, employer partnerships, and graduate tracking systems in enhancing employability (Brown & Hesketh, 2004). However, the unique socioeconomic and institutional challenges faced by African HEIs, such as limited resources and weak industry linkages, remain underexplored (Makuwira, 2020). The purpose of this study is to explore how career education, facilitated through initiatives like the Education Collaborative, can promote student employability in West African higher education institutions. This study seeks to identify the barriers faced by HEIs in aligning academic training with market demands and to evaluate the effectiveness of existing career development initiatives. Furthermore, it aims to propose strategies for enhancing career education frameworks to better equip graduates for the labor market. By addressing the identified gaps, the study contributes to ongoing efforts to bridge the divide between academic institutions and employers, fostering sustainable career pathways for students.

LITERATURE REVIEW

The theoretical frameworks underpinning this study, Holland's Career Choice Theory and Human Capital Theory, provide a robust foundation for exploring career education's role in promoting employability. Career education, as an institutional strategy, bridges the gap between academic training and labor market demands. The synthesis below synthesizes insights from global and regional studies, emphasizing the integration of employability skills, mentoring, and entrepreneurship education into higher education curricula.

Holland's Career Choice Theory and Career Education

Holland's Career Choice Theory posits that career decisions are influenced by individual personality types and work environment congruence. The theory highlights the importance of aligning students' interests and abilities with labor market demands to ensure sustainable employability. Recent studies emphasize the role of structured mentoring programs in aligning student aspirations with career opportunities. For instance, Bolton-King (2022) found that mentoring programmes enhanced self-efficacy and interpersonal skills, enabling graduates to navigate complex job markets effectively. Similarly, Carvalho and Santos (2022) demonstrated that metacognitive and collaborative skills fostered through peer mentoring programs are

critical for career readiness, particularly in rapidly evolving sectors such as technology and education.

Holland's Career Choice Theory provides a valuable framework for addressing the research gap in career education and employability tracking in West African HEIs. The theory asserts that individuals make career choices based on their personality types and work environment congruence, which has direct implications for how HEIs design and implement career education. However, many institutions lack structured curricula that align students' skills and career aspirations with labor market demands. By integrating Holland's RIASEC model (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional personalities) into curriculum development, HEIs can tailor skill-based training that prepares students for careers suited to their strengths and interests. For example, students with Enterprising personalities should have access to entrepreneurship programs, while those with Investigative traits would benefit from problem-solving and research-based learning approaches. This alignment ensures that graduates are not just employable but are placed in roles where they can thrive and contribute meaningfully to the workforce.

Another key issue identified in literature is the lack of graduate employability tracking systems, preventing institutions from measuring the effectiveness of their career services. Holland's theory suggests that career success depends on the alignment between one's job and their personality, meaning HEIs should go beyond tracking employment rates and assess graduate job satisfaction, skill applicability, and career progression. By collecting data on whether graduates work in fields aligned with their training and personality types, institutions can refine their career services, mentorship programs, and employer partnerships to improve long-term employability outcomes. Strengthening these systems will ensure that HEIs not only equip students with skills but also guide them toward sustainable and fulfilling careers, ultimately bridging the gap between academic training and labor market needs.

Human Capital Theory and Employability Skills Development

Human Capital Theory also views education as an investment in skills and knowledge that enhances productivity and economic contributions. This perspective underscores the critical role of higher education institutions (HEIs) in equipping students with employability skills. Pardo-Garcia and Barac (2020) highlight the effectiveness of entrepreneurship education in fostering employability by encouraging innovation and problem-solving. Their study revealed that integrating sustainability-focused projects into the curriculum significantly enhanced students' abilities to address real-world challenges. Oria (2012) similarly advocates for integrating generic skills, such as teamwork, communication, and critical thinking, into academic programs to address skills mismatches between graduates and employers.

One way HEIs can apply Human Capital Theory is by integrating workplace-relevant skills into their curricula, such as problem-solving, digital literacy, teamwork, leadership, and critical thinking all of which are increasingly demanded by employers (World Economic Forum, 2023). This study also highlights the importance of employer collaborations, internships, and industry-driven career programs, which serve as mechanisms for developing human capital in a structured manner. Moreover, employability tracking systems should be established to measure the return on investment (ROI) in education, ensuring that graduates are securing meaningful employment aligned with their skills. By implementing structured career education, experiential learning, and graduate tracking mechanisms, HEIs can fulfill their role as human capital developers, bridging the gap between education and economic productivity while addressing graduate unemployment and underemployment challenges in West Africa.

Regional Context: Challenges and Opportunities in West Africa

In West Africa, higher education institutions (HEIs) encounter distinct challenges in implementing career education that aligns with labor market demands. These challenges include resource constraints, limited employer engagement, and the absence of robust graduate tracking systems. McCowan (2015) critiques the overemphasis on theoretical content in HEIs, urging a shift toward experiential and skill-based learning to enhance employability outcomes. Similarly, Oria (2012) highlights that employability in the region is often curtailed by content-heavy academic curricula that inadequately address the development of transversal and interpersonal skills needed in the labor market.

Fostering partnerships between universities and industries is vital for bridging the skills gap. The African Development Bank and initiatives such as the Education Collaborative have emphasized region-specific solutions to these challenges. Pardo-Garcia and Barac (2020) suggest that entrepreneurship education, when combined with real-world problem-solving, can create opportunities for graduates to develop practical skills, particularly in regions with constrained formal job markets. Such programs not only foster technical expertise but also promote innovation and adaptability, essential for navigating the rapidly changing economic landscape.

Moreover, Bolton-King (2022) demonstrates that structured mentoring programs, which are underutilized in West Africa, can provide both academic and psychosocial support to students, thereby enhancing their self-efficacy and career readiness. Carvalho and Santos (2022) also highlight that integrating collaborative and metacognitive skill development through peer-learning frameworks can help students in developing economies build employability skills that match industry expectations. To overcome resource constraints, HEIs in West Africa can draw lessons from the European Bologna Process, which has successfully integrated employability into academic curricula by emphasizing transferable skills and collaborative learning. The case study from the University of Zaragoza illustrates the importance of combining academic content with complementary activities, such as internships and interdisciplinary projects, to enhance students' career readiness (Oria, 2012).

Aligning career education with sustainable development goals (SDGs) could also be particularly impactful in West Africa, where the labor market is influenced by climate change and resource-dependent industries. Programmes that integrate sustainability with employability skills, as highlighted by Pardo-Garcia and Barac (2020), can prepare graduates to lead innovative solutions in sectors such as agriculture, renewable energy, and technology. These approaches not only address employability challenges but also create opportunities for HEIs to contribute to broader socioeconomic development.

The Role of Mentoring and Experiential Learning

Mentoring and experiential learning are pivotal strategies for enhancing employability, bridging the gap between theoretical knowledge and practical application. Structured mentoring programs provide an environment for skill acquisition and professional growth, fostering both individual and collective learning. Bolton-King (2022) demonstrated that mentoring programs in forensic science curricula significantly enhanced employability by improving mentors' and mentees' communication, self-efficacy, and collaborative skills. These programs also promoted a sense of community and shared responsibility, essential for workplace integration.

Carvalho and Santos (2022) further highlight the importance of technology-enhanced peer learning in developing metacognitive and collaborative skills. Their study demonstrates how

digital tools can facilitate reflective thinking and teamwork, critical competencies in modern labor markets. The findings align with Holland's Career Choice Theory, which emphasizes aligning individual personalities and interests with career environments. Mentoring programs can help students identify their strengths and interests, fostering congruence with suitable career paths.

Human Capital Theory complements this perspective by framing mentoring and experiential learning as investments in skill development, which yield economic and social returns. The integration of experiential learning aligns with this theory by providing students with opportunities to apply theoretical knowledge in real-world contexts. For example, Pardo-Garcia and Barac (2020) illustrate how entrepreneurship-focused experiential learning enables students to develop problem-solving, innovation, and adaptability skills, which are highly valued in labor markets.

Moreover, experiential learning programs, such as internships and collaborative projects, align with the principles of Holland's Career Choice Theory by allowing students to explore work environments that match their vocational interests. Oria (2012) underscores the importance of combining academic content with complementary activities to build transferable skills like teamwork, communication, and critical thinking, which are essential for employability in diverse sectors.

By leveraging both mentoring and experiential learning, HEIs can create holistic frameworks that align with Human Capital Theory's emphasis on skill development and Holland's focus on career alignment. These strategies not only enhance employability but also prepare graduates to adapt to dynamic and complex job markets. For example, mentoring programs can guide students in articulating their career goals, while experiential learning ensures they acquire the technical and soft skills needed to achieve those goals. Together, these approaches foster a resilient and agile workforce equipped to navigate the challenges of the 21st-century economy.

Entrepreneurship Education as a Catalyst for Employability

Entrepreneurship education has gained prominence as a key strategy for enhancing employability, particularly in regions where traditional job markets are constrained. By integrating entrepreneurial thinking, innovation, and problem-solving skills into higher education curricula, institutions can better prepare graduates to navigate complex and evolving labor markets (Pardo-Garcia & Barac, 2020). Unlike conventional academic programs that focus on theoretical knowledge, entrepreneurship education fosters adaptability, resilience, and practical skill development, enabling students to create their own employment opportunities and drive economic growth (Bae et al., 2014). This approach aligns with Human Capital Theory, which emphasizes education as an investment that enhances workforce productivity and economic contributions (Becker, 1993).

Studies show that institutions that actively incorporate interdisciplinary projects, business simulations, and entrepreneurship competitions into their curricula tend to produce graduates with higher employability rates and entrepreneurial intentions (Biberhofer et al., 2019). The case of the University of Zaragoza demonstrates that interdisciplinary collaboration, coupled with real-world problem-solving activities, enhances students' teamwork, creativity, and leadership skills, making them more competitive in the job market (Oria, 2012). Furthermore, entrepreneurship education has proven particularly beneficial in developing economies, where formal employment opportunities are limited, by equipping students with the skills to launch and sustain their own ventures (Gibb, 2002). Research by Fayolle and Gailly (2015) also suggests that entrepreneurship education positively influences career readiness, self-efficacy, and students' ability to seize market opportunities.

A growing body of literature highlights that entrepreneurship education should go beyond starting businesses and focus on fostering an entrepreneurial mindset, which includes risk-taking, opportunity recognition, and innovative thinking (Neck & Greene, 2011). In Sub-Saharan Africa, where unemployment remains a significant challenge, entrepreneurial education is essential for bridging the skills gap between academic training and labor market expectations (Olawolu & Kaegon, 2012). Programs that integrate sustainability-focused entrepreneurship, social innovation, and digital transformation can further enhance employability by preparing graduates for emerging industries, including renewable energy, agribusiness, and technology-driven solutions (Pardo-Garcia & Barac, 2020).

To maximize the impact of entrepreneurship education, HEIs should strengthen university-industry linkages, provide mentorship programs, and facilitate startup incubation initiatives that give students hands-on experience in business creation and management (Binks, Starkey, & Mahon, 2006). Additionally, institutions should adopt experiential learning models, such as business accelerators, design thinking workshops, and pitch competitions, to cultivate entrepreneurial competencies (Pittaway & Cope, 2007). Policymakers and education stakeholders must recognize that entrepreneurship education is not just an academic discipline but a powerful tool for workforce development and economic transformation.

Design/Methodology

This study employed a quantitative self-assessment approach to evaluate career education and employability support services across institutions of higher learning (IHLs) in the West Africa Hub under the Education Collaborative. The research was guided by Holland's Career Choice Theory and Human Capital Theory, emphasizing the alignment of students' career interests with labor market demands and the role of education in enhancing employability skills. A descriptive study was conducted using data from 37 higher education institutions across seven West African countries. The study adopted a census sampling approach, ensuring comprehensive participation from all institutions under the Collaborative. The survey assessed five key areas: graduate transition, career services resourcefulness, career development programming, employer engagement, and graduate tracking systems.

The questionnaire was designed using Google Forms and distributed via email to career leads at all 37 institutions. Data collection took place between February and March 2024, capturing the career and employability status of institutions during that period. The survey enabled institutions to evaluate their career services, identify gaps, and align their programs with labor market needs. Structured mentoring and experiential learning were emphasized as critical components of career development, as highlighted by previous studies. The study also examined how institutions engage with employers to ensure graduates acquire relevant skills and are well-prepared for job market demands. Graduate tracking mechanisms were also assessed to understand how institutions monitor employability outcomes and make improvements to their career services.

A descriptive statistical approach was used to analyse the data, employing weighted averages and frequency distributions to assess career education trends, challenges, and institutional support systems. Findings indicate a need for stronger industry collaborations, enhanced career services, and more structured tracking mechanisms to improve graduate employability outcomes. By integrating Holland's Career Choice Theory and Human Capital Theory, the study provided insights into how institutional career support structures influence students' professional readiness and long-term success. The results will contribute to policy recommendations aimed at improving career education in West African higher education institutions, ensuring graduates are better equipped to navigate the evolving job market.

Table 1: List of West African countries under the Education Collaborative

Country	Number
Burkina Faso	1
Gambia	1
Ghana	21
Ivory Coast	1
Mali	1
Nigeria	11
Sierra Leone	1
Total	**37**

Analysis and Findings

The participating universities were classified based on ownership structure, comprising public and private institutions. The analysis revealed that public universities constituted the majority, accounting for approximately 70 percent of the sample, while private universities accounted for 30 percent. Public universities generally had more extensive career service departments but faced bureaucratic challenges and funding constraints that limited their flexibility in career programming. Conversely, private universities, despite having fewer institutional barriers, struggled with employer engagement due to their smaller alumni networks and industry reach.

The findings indicate that private universities are more likely to have dedicated career units than public universities, with 82 percent of private institutions having a dedicated career unit, compared to 46 percent in public universities. One of the key differences is the level of investment in career services. Private universities, which tend to operate with greater flexibility and autonomy, allocate more resources to their career units, leading to structured career support programs. These universities often have closer ties with employers, facilitating internship placements, career fairs, and skills development programs. In contrast, despite the higher number of public universities in the study, less than half have dedicated career units, indicating a gap in structured career support for students. Public universities often face challenges related to bureaucratic constraints, limited funding, and larger student populations, which may make it difficult to establish and sustain career services at the same level as private institutions.

The data highlights a significant disparity in career readiness support between public and private universities. While private universities prioritize career services as a key component of student development, public universities lag in institutionalizing these units, potentially affecting graduate employability outcomes. The findings suggest that public universities need greater investment in career services, structured career mentorship programs, and employer collaborations to bridge the gap. Enhancing career unit accessibility in public institutions could play a crucial role in improving graduate transition rates and ensuring that students from all backgrounds receive adequate support to navigate the job market.

The data also indicates that 82 percent of private universities receive management support, compared to only 31 percent of public universities. This gap highlights fundamental structural

differences in how career services are prioritized within public and private institutions. Private universities benefit from more flexible governance structures, direct oversight, and a stronger emphasis on career development as a key student service. With a higher proportion of management support, private universities can allocate funding, streamline decision-making, and implement career programs with less bureaucracy. These institutions also have greater autonomy in forming industry partnerships, ensuring that career services are well integrated into academic programs. The higher management commitment in private institutions reflects a market-driven approach, where career services play a crucial role in student recruitment and retention.

For instance, a study assessing career services in Egyptian universities found that private institutions were more proactive in implementing comprehensive career support programs, facilitated by substantial management support (Elia, 2022).

Table 2: Management support to HEIs

Ownership	Number	Management support	Percentage
Private	11	9	82
Public	26	8	31
Total	**37**	**17**	46

In contrast, public universities face several challenges that hinder strong management support for career services. Bureaucratic processes, budget constraints, policy restrictions, and governance structures often delay decision-making and limit financial allocations for career units. Many public universities operate within rigid government frameworks, making it difficult to secure adequate funding, hire specialized career advisors, and develop employer partnerships efficiently. Additionally, infrastructure limitations and broader economic challenges further restrict the ability of public institutions to prioritize and expand career services. Research indicates that public institutions in the MENA region, for example, have struggled to establish effective career services due to insufficient management support and financial limitations (Prospera Consulting, 2023). The disparity in management support between public and private universities underscores the need for policy reforms and strategic initiatives aimed at bolstering career services across all higher education institutions.

Limited management support for career services in universities, particularly in public institutions, is primarily attributed to **budget constraints, bureaucracy, policy and oversight, governance structures, infrastructure, and economic context**. Many public universities operate under strict financial limitations, making it difficult to allocate sufficient funds to career services. This underfunding leads to understaffed career units, inadequate career guidance, and outdated resources, ultimately affecting service delivery (Hiration, 2023). Additionally, bureaucratic processes slow down decision-making and create administrative hurdles that prevent career units from securing resources and forming meaningful industry partnerships (Prospera Consulting, 2023). Governance structures in public universities also pose challenges, as career services often compete with other student support areas, such as counseling and housing, for limited institutional funding. Without clear institutional prioritization, career services remain underfunded and poorly integrated into the academic framework (NACE, 2019).

The reason most public universities gave for the little, or no support was infrastructure limitations and broader economic challenges. Many universities lack the physical and technological infrastructure to support effective career services, such as digital career platforms or dedicated career centres. Economic constraints at the national level affect university funding, limiting their ability to hire experienced career advisors and implement structured employability programs. Additionally, high student-to-staff ratios in career units make personalized career guidance difficult, leading to low service utilization and diminished institutional commitment (Johns Hopkins University, 2024).

The analysis of 37 universities, comprising 11 private and 26 public institutions, revealed disparity in budget allocations for career activities. Out of the total 13 universities with dedicated budgets for career services, 6 are private institutions, while 7 are public institutions. Despite the higher number of public universities, their career services budgets remain disproportionately low relative to their student populations and institutional demands.

Table 3*:* Dedicated budget for HEIs

Ownership	Number	Budget
Private	11	6
Public	26	7
Total	**37**	**13**

Private universities tend to allocate more focused and consistent funding toward career services, reflecting their market-driven approach and emphasis on graduate employability. These institutions often view career services as a strategic tool for attracting students and maintaining competitive graduate outcomes. In contrast, public universities, face significant bureaucratic and financial constraints that limit the effective utilization of these funds. Public institutions operate under strict governmental budget policies, often leading to delays in disbursement and competing institutional priorities that divert funds away from career development initiatives. Consequently, public universities with dedicated budgets may still struggle to provide comprehensive career guidance, employer engagement, and internship programs compared to their private counterparts.

The analysis also revealed that of 37 university responses regarding dedicated career curricula, only 18.9 percent of institutions have an all-year-round coordinated curriculum, integrating progressive career development throughout a student's academic journey. Additionally, 29.7 percent of institutions have structured career workshops and activities, which, while beneficial, lack the consistency and long-term engagement of a fully integrated career curriculum. A concerning 45.9 percent of institutions reported having no dedicated career curriculum, highlighting a significant gap in career preparedness programs across universities. This suggests that many students may graduate without structured career guidance, internships, or employability skills training. A small percentage of institutions are in the policy formulation stage or actively drafting a soft skills training manual, indicating that efforts are being made to introduce career education, but these initiatives remain in the early stages.

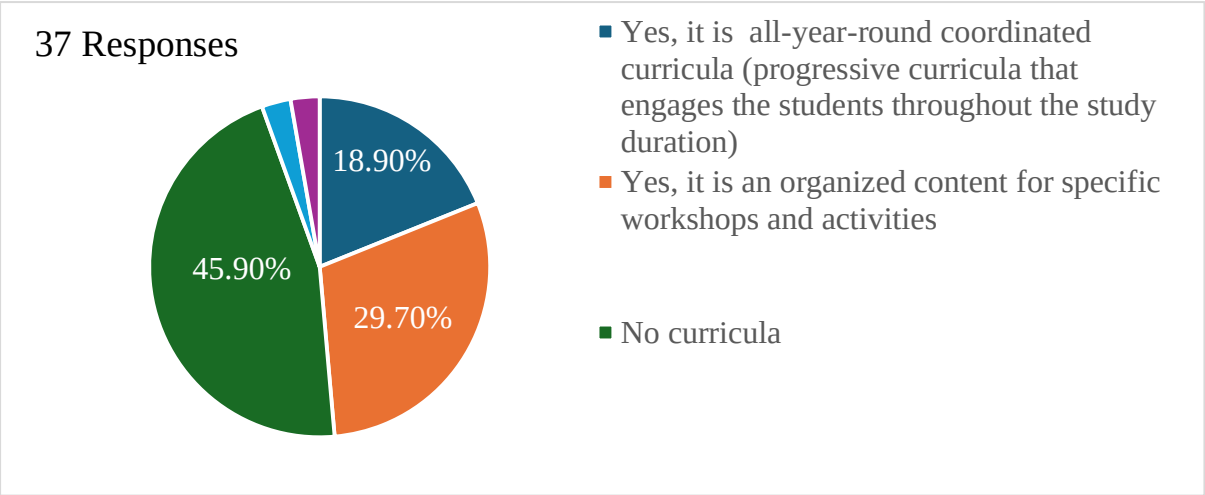

Figure 1: Dedicated career curriculum

The results indicates that a variety of career services are being offered, but their implementation varies significantly across institutions. Internship programs stand out as the most widely provided service, with 31 institutions (83.8%) offering students opportunities to gain hands-on experience. This high percentage reflects the growing emphasis on practical learning and industry exposure. Additionally, entrepreneurship programs (78.4%) are also widely available, highlighting an increasing shift towards self-employment and business creation as viable career paths.

Other career services provided include career fairs and networking opportunities (54.1%), which are essential for connecting students with employers and professional networks. Also, resume and cover letter writing workshops (48.6%) and interview preparation (37.8%) indicate that institutions recognize the importance of job application readiness. However, career exploration and one-on-one CV reviews (32.4%) are less commonly provided, which could indicate a gap in personalized career guidance. Alarmingly, some institutions (2.7%) reported offering no career services at all, while industrial attachment and job placement support were also minimal (2.7%), pointing to a potential shortfall in structured workforce integration initiatives. These findings suggest that while career services are available in many institutions, there is a need for greater focus on individualized career counseling, structured placement programs, and job search support to better prepare students for the evolving job market.

Table 4*:* Career services run by HEIs

Career Services	Number of Institutions	Percentage (%)
Internship Programs	31	83.8
Entrepreneurship Programs	29	78.4
Career Fairs & Networking	20	54.1
Resume & Cover Letter Writing	18	48.6
Interview Preparation	14	37.8
Career Exploration	12	32.4
One-on-One CV Review	12	32.4
Job Searching Support	13	35.1
Industrial Attachment & Job Placement	1	2.7
No Career Services Provided	1	2.7

The analysis of higher education institutions (HEIs) indicates that only a small percentage actively track and report on career outcomes. Among private universities, only 4 institutions (38.9%) engage in such activities, while only 5 out of 27 public universities (16.7%) systematically track and report employability data. This data highlights a significant gap in institutional accountability and career services effectiveness across both private and public universities. The disparity suggests that public universities face more challenges in tracking career outcomes compared to private institutions. Private universities often have more structured career services, dedicated career counsellors, and stronger alumni engagement, allowing them to track graduate employability more effectively. In contrast, public universities typically have larger student populations and bureaucratic constraints that make systematic tracking difficult. About 44.4% of institutions do not track or report on career and employability at all, which underscores the need for policy interventions and institutional reforms to prioritize career services and employability data collection.

Most HEIs do not track and report on career and employability outcomes due to limited institutional capacity and resources, as they often lack funding, personnel, and technological tools for employability tracking (Hiration, 2023). Additionally, the absence of structured data collection systems and alumni networks makes it difficult to monitor graduate career trajectories (Prospera Consulting, 2023). In many institutions, career tracking is not a priority, as academic programs focus more on coursework than graduate outcomes (NACE, 2019). Public universities, in particular, face bureaucratic and administrative barriers that slow down the adoption of employability tracking frameworks (Johns Hopkins University, 2024). Furthermore, low graduate engagement makes data collection difficult, as many graduates do not actively report their employment status. Lastly, the lack of employer collaboration limits access to information on graduate job placements, making it difficult for institutions to assess their employability impact. Addressing these challenges requires stronger institutional commitment, investment in tracking systems, and improved alumni and employer engagement to enhance career monitoring and reporting.

Among the universities that track and report on career and employability, various data collection techniques are employed to gather information on graduate outcomes. The most commonly used method is alumni surveys, which allow institutions to directly collect data from graduates about their employment status, job satisfaction, and career progress. This is a widely used tool as it enables universities to gather firsthand insights from their former students and assess the effectiveness of their career services.

Another significant method is the use of an alumni database (11 institutions), which serves as a structured system for tracking graduates over time. Universities that maintain well-organized databases can monitor employment trends, identify key employers hiring their graduates, and analyze career pathways. Similarly, institutional records (8 institutions, 38.1%) are also leveraged, where internal student records and academic tracking systems provide insight into graduate transitions into the workforce. Online surveys (6 institutions, 28.6%) are also used to collect career-related data from graduates. This method is efficient and cost-effective, especially for institutions with a large number of alumni. However, response rates can vary, making it necessary to complement online surveys with other methods. Social media platforms (3 institutions, 14.3%) are becoming an emerging tool, where universities track alumni career updates through platforms like LinkedIn and Facebook. Although less formal, this method provides real-time insights into alumni achievements and industry engagements. Less commonly used methods include phone calls (4.8%) and direct calls to graduates (4.8%), which indicate that only a few universities take the initiative to personally follow up with graduates

regarding their employment status. These methods, though effective in obtaining direct and detailed responses, require significant time and personnel resources.

To find out how the tracer study is used to improve institutional programmes, only 21 responses highlighted how higher education institutions (HEIs) utilize tracer study data to inform decision-making and improve student services. The most significant applications of tracer study data include curriculum development (66.7%) and enhancing career services (66.7%). This suggests that institutions are recognizing the need to align academic programs with labor market demands and ensure that career services provide relevant support to students. By adapting curricula based on graduate experiences, universities can bridge the gap between academic training and real-world job requirements. Likewise, improving career services based on tracer study feedback allows institutions to refine career counseling, employer engagement, and internship opportunities to better support students' transition into the workforce.

Mentorship programs (61.9%) also play a crucial role in institutional improvement, as universities use graduate feedback to design and implement structured mentorship initiatives that connect students with industry professionals and alumni. Similarly, program evaluation (57.1%) is another key use of tracer study data, ensuring that courses and educational programs remain relevant, competitive, and effective in equipping students with the necessary skills. Another critical area influenced by tracer studies is addressing skill gaps (47.6%). Institutions leverage graduate employment data to identify specific competencies that students may lack upon entering the workforce and integrate targeted skill development into their academic and extracurricular offerings. This proactive approach ensures that students are better prepared for evolving industry requirements.

However, a small proportion (4.8%) of institutions have not yet considered using tracer study data for program enhancement, indicating a need for increased awareness of the importance of graduate tracking. Ensuring that all institutions effectively utilize tracer studies will help drive evidence-based improvements in curriculum design, student support services, and career readiness initiatives.

CONCLUSION

The study underscores the critical role of higher education institutions (HEIs) in equipping students with the skills and knowledge necessary for successful career transitions. However, the findings reveal significant disparities between public and private universities in career education, employability support, and tracking mechanisms. Private universities exhibit a more structured approach to career services, benefiting from greater management support, dedicated career units, and employer partnerships. In contrast, public universities face bureaucratic constraints, limited funding, and weaker industry linkages, all of which hinder their ability to provide comprehensive career education. The lack of dedicated employability tracking systems in most institutions further exacerbates the challenges in aligning academic programs with labor market demands.

Using Holland’s Career Choice Theory and Human Capital Theory, the study highlights the importance of aligning students’ skills, interests, and educational experiences with industry needs. Holland’s theory emphasizes career alignment based on individual personality traits, suggesting that HEIs should integrate structured mentorship and career counseling to help students make informed career choices. Similarly, Human Capital Theory underscores education as an investment in workforce productivity, reinforcing the need for practical learning experiences, employability skill development, and industry collaborations to enhance graduate competitiveness.

The results indicate that institutions with structured career tracking, experiential learning, and employer engagement yield better employability outcomes. To bridge the gaps identified, HEIs must strengthen career services, integrate digital tracking systems, and foster university-industry partnerships. Policymakers and education stakeholders should also prioritize sustainable career education policies, ensuring that graduates are equipped to navigate the dynamic job market and contribute meaningfully to economic development.

RECOMMENDATIONS

To enhance career education and employability outcomes, higher education institutions (HEIs) should establish dedicated career units, particularly in public universities, which face structural and financial challenges. Strengthening university-industry collaborations is crucial, as partnerships with employers can provide internship opportunities, mentorship programs, and job placements that align with labor market demands. Additionally, integrating career education into the curriculum through structured career development courses will help students make informed career choices based on Holland's Career Choice Theory. Universities must also leverage technology by implementing AI-driven career services, online job-matching platforms, and alumni tracking databases to improve graduate employability. Furthermore, increasing funding and management support for career services is essential, with universities lobbying for government funding and donor assistance to sustain and expand career initiatives.

HEIs should also use tracer study data to identify and address skill gaps by incorporating soft skills training, entrepreneurship education, and industry-specific technical competencies into their programs. Engaging alumni in mentorship and networking programs can provide students with real-world career insights and opportunities. Policy reforms should institutionalize career education, mandating structured employability tracking in all HEIs, while continuous research on labor market trends and employer feedback should inform curriculum improvements. By implementing these strategies, universities can bridge the gap between academic training and labor market expectations, ensuring that graduates are well-prepared for successful careers and long-term economic contribution.

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